Author Index of Volume 188

Baker, T. N., 229
Bertrand, C., 133
Botstein, O., 305
Bowman, K. J., 317

Cahoon, J. R., 211
Chandler, H. D., 97
Chang, S., 23
Cohen, J. B., 51
Cornet, M., 133

Dahms, M., 301
Dallas, J. P., 133
Deakin, A. S., 81
Desarmot, G., 159
Dong, H., 43
Dryden, J. R., 81
Dudek, H. J., 201

Earthman, J. C., 59
Edwards, L., 121
Ensinger, W., 335

Favre, J. P., 159
Feillard, P., 159
Feller-Kniepmeier, M., 147
Fitzgerald, T. J., 51
Friend, C. M., 153
Fu, C. T., 91

Gan, D., 327
Gjengedal, R., 247
Gortzen, J. N., 97
Gu, H., 23
Guo, H., 23

Hey, J. C., 291
Higashi, K., 167
Huang, C. M., 341
Huang, H. H., 219
Hutchinson, J. W., 103

Inal, O. T., 251

Jardine, A. P., 291

Kang, C. G., 193
Karmazin, L., 185
Katsman, A., 241
Klauzner, A., 81
Kluken, A. O., 247
Kokini, K., 317
Kool, W. H., 277
Kratochvíl, J., 69
Krejčí, J., 185
Kriven, W. M., 341
Kuttner, T., 147

Laird, C., 23
Leboeuf, M., 255
Lee, J. T., 219
Leucht, R., 201
Levin, L., 241
Lin, Y. C., 327
Liu, D. M., 91
Liu, X., 247
Louat, N., 1
Lu, T. J., 103

Mamalis, A. G., 267
Mayes, C. D., 283
McCartney, D. G., 283
Meggers, K., 301
Mohamed, F. A., 59
Monier, C., 133
Morris, D. G., 255
Morris, M. A., 255
Mridha, S., 229
Müller, H. R., 335

Nagatomo, K., 353
Nieh, T. G., 167

Ovid'ko, I. A., 37

Padmanabhan, K. A., 141
Pantelis, D. I., 267
Park, K. T., 59
Priesmeyer, H. G., 301
Priester, L., 113

Quaack, C. J., 277

Rabinkin, A., 305
Raman, S. G. S., 141
Ray, S., 193
Richman, R. H., 251
Rohatgi, P. K., 193
Rouby, D., 159

Sadananda, K., 1
Saxlová, M., 69
Shen, P., 327
Shimamoto, T., 175
Shinozaki, D. M., 81
Sinha, A., 317
Solberg, J. K., 247
Suganuma, K., 353
Szalay, A., 267

Tatlock, G. J., 283
Thompson, A. W., 43
Towle, D. J., 153
Trela, W. J., 301
Trichet, M. F., 133
Tsai, W. T., 219

Vasudevan, A. K., 1
Vaxevanidis, N. M., 267
Veyssiere, P., 133

Wadsworth, J., 167
Wang, J. N., 175
Werber, T., 241
Wu, J. M., 91

Xia, Z. C., 103
Xu, Y., 341

Yang, S. T., 59
Yu, D. P., 113

Zhang, Y. H., 121
Zhu, D., 341
Zimmerly, C. A., 251

Subject Index of Volume 188

Alloys
- a comparative study of superplasticity and cavitation in mechanically-alloyed IN9021 and a SiC_p/IN9021 composite, 167
- brazing of titanium-based alloys with amorphous 25wt.%Ti–25wt.%Zr–50wt.%Cu filler metal, 305
- explosive welding of a near-equiatomic nickel–titanium alloy to low-carbon steel, 251
- kinetics of tensile deformation in a precipitation-hardened aluminium alloy, 97
- microstructure of a nickel-base superalloy after creep in [011] orientation at 1173 K, 147
- observations on the microstructure and performance of an Al–Ti–C grain-refining master alloy, 283
- phase transformations and recrystallization in Ni–33at.%Cr alloy, 185
- properties of SiC-fibre reinforced titanium alloys processed by fibre coating and hot isostatic pressing, 201
- recrystallization mechanisms in a Cu–Cr–Zr alloy with a bimodal distribution of particles, 255
- residual stress in and around rivets in clad aluminum alloy plates, 51
- the effect of impurities on ductility and cavitation in the superplastic Zn–22%Al alloy, 59
- thermodynamic calculation of chemical driving force for complex carbonitrides in multicomponent microalloyed steels, 247
- transmission electron microscopy analysis of the early stages of damage in a γ/γ' nickel-based alloy under low cycle fatigue, 133

Aluminium
- a micromechanical solidification heat transfer in one dimensional Al–Al_2O_3 composite and its consequence on microstructure evolution, 193
- a re-evaluation of inverse segregation in the Al(rich)–Cu system, 211
- combustion-synthesized β'-SiAlON reinforced with SiC monofilaments, 341
- fabrication of Al_2O_3 fiber preform with γ-Al_2O_3 powder binder for 6061 alloy matrix composites, 353
- kinetics of tensile deformation in a precipitation-hardened aluminium alloy, 97
- observations on the microstructure and performance of an Al–Ti–C grain-refining master alloy, 283
- properties of semisolid aluminium matrix composites, 277
- residual stress in and around rivets in clad aluminum alloy plates, 51
- the effect of impurities on ductility and cavitation in the superplastic Zn–22%Al alloy, 59
- the effects of electrodischarge machining on fracture strength and surface microstructure of Al_2O_3–Cr_3C_2 composite, 91

Austenite
- investigation of the austenite–bainite transformation in gray iron using real time neutron transmission, 301

Bainite
- investigation of the austenite–bainite transformation in gray iron using real time neutron transmission, 301

Beams
- delamination of beams under transverse shear and bending, 103

Bending
- delamination of beams under transverse shear and bending, 103

Carbon
- a comparative study of superplasticity and cavitation in mechanically-alloyed IN9021 and a SiC_p/IN9021 composite, 167
- combustion-synthesized β'-SiAlON reinforced with SiC monofilaments, 341
- explosive welding of a near-equiatomic nickel–titanium alloy to low-carbon steel, 251
- observations on the microstructure and performance of an Al–Ti–C grain-refining master alloy, 283
- properties of SiC-fibre reinforced titanium alloys processed by fibre coating and hot isostatic pressing, 201
- the effects of electrodischarge machining on fracture strength and surface microstructure of Al_2O_3–Cr_3C_2 composite, 91
- thermodynamic calculation of chemical driving force for complex carbonitrides in multicomponent microalloyed steels, 247

Cavitation
- a comparative study of superplasticity and cavitation in mechanically-alloyed IN9021 and a SiC_p/IN9021 composite, 167
- the effect of impurities on ductility and cavitation in the superplastic Zn–22%Al alloy, 59

Ceramics
- elastic constant degradation from microcracking in ceramic–ceramic composites cycled by slow thermal loading, 317

Chromium
- phase transformations and recrystallization in Ni–33at.%Cr alloy, 185
- recrystallization mechanisms in a Cu–Cr–Zr alloy with a bimodal distribution of particles, 255
- the effects of electrodischarge machining on fracture strength and surface microstructure of Al_2O_3–Cr_3C_2 composite, 91

Cladding
- macroscopic and microscopic phenomena of nickel/titanium "shape memory" bimetallic strips fabricated by explosive cladding and rolling, 267
- residual stress in and around rivets in clad aluminum alloy plates, 51

Coatings
- properties of SiC-fibre reinforced titanium alloys processed by fibre coating and hot isostatic pressing, 201
- surface modification and coating of powders by ion beam techniques, 335

Combustion
- combustion-synthesized β'-SiAlON reinforced with SiC monofilaments, 341

Composites
a comparative study of superplasticity and cavitation in mechanically-alloyed IN9021 and a SiC_p/IN9021 composite, 167
a micromechanical solidification heat transfer in one dimensional Al–Al_2O_3 composite and its consequence on microstructure evolution, 193
elastic constant degradation from microcracking in ceramic–ceramic composites cycled by slow thermal loading, 317
fabrication of Al_2O_3 fiber preform with γ-Al_2O_3 powder binder for 6061 alloy matrix composites, 353
limits of conventional micromechanical analysis of interface properties in glass–epoxy model composites, 159
microstructure of zirconia–(MnZn ferrite) composites, 327
properties of semisolid aluminium matrix composites, 277
the effects of electrodischarge machining on fracture strength and surface microstructure of Al_2O_3–Cr_3C_2 composite, 91
Copper
a re-evaluation of inverse segregation in the Al(rich)–Cu system, 211
brazing of titanium-based alloys with amorphous 25wt.%Ti–25wt.%Zr–50wt.%Cu filer metal, 305
recrystallization mechanisms in a Cu–Cr–Zr alloy with a bimodal distribution of particles, 255
Cracking
a review of crack closure, fatigue crack threshold and related phenomena, 1
crack-free hard surface produced by laser nitriding of commercial purity titanium, 229
cracking characteristics of A516 steel weldment in H_2S containing environments, 219
elastic constant degradation from microcracking in ceramic–ceramic composites cycled by slow thermal loading, 317
on the blocking effect of grain boundaries on small crystallographic fatigue crack growth, 121
Creep
microstructure of a nickel-base superalloy after creep in [011] orientation at 1173 K, 147
on newtonian viscoplastic dislocation creep and the effect of the Peierls stress, 175
Crystals
new micromechanism for strengthening in polycrystalline solids, 37
on the blocking effect of grain boundaries on small crystallographic fatigue crack growth, 121
orientation dependence of cyclic deformation in high purity titanium single crystals, 23
phase transformations and recrystallization in Ni–33at.%Cr alloy, 185

Damage
transmission electron microscopy analysis of the early stages of damage in a γ/γ' nickel-based alloy under low cycle fatigue, 133
Deformation
kinetics of tensile deformation in a precipitation-hardened aluminium alloy, 97
orientation dependence of cyclic deformation in high purity titanium single crystals, 23
Delamination
delamination of beams under transverse shear and bending, 103

Dislocation
a theory of dipolar dislocation wall structures, 69
effects of hydrogen on thermally activated dislocation motion in iron, 43
on newtonian viscoplastic dislocation creep and the effect of the Peierls stress, 175
Ductility
the effect of impurities on ductility and cavitation in the superplastic Zn–22%Al alloy, 59

Epoxy
limits of conventional micromechanical analysis of interface properties in glass–epoxy model composites, 159
Extrusion
solid state extrusion as a mechanical test method, 81

Fatigue
a review of crack closure, fatigue crack threshold and related phenomena, 1
on the blocking effect of grain boundaries on small crystallographic fatigue crack growth, 121
some studies on the incremental step (fatigue) test, 141
transmission electron microscopy analysis of the early stages of damage in a γ/γ' nickel-based alloy under low cycle fatigue, 133
Ferrite
microstructure of zirconia–(MnZn ferrite) composites, 327
Fibres
fabrication of Al_2O_3 fiber preform with γ-Al_2O_3 powder binder for 6061 alloy matrix composites, 353
properties of SiC-fibre reinforced titanium alloys processed by fibre coating and hot isostatic pressing, 201
Fracture
the effects of electrodischarge machining on fracture strength and surface microstructure of Al_2O_3–Cr_3C_2 composite, 91

Glass
limits of conventional micromechanical analysis of interface properties in glass–epoxy model composites, 159
Grain boundaries
on the blocking effect of grain boundaries on small crystallographic fatigue crack growth, 121

Heat transfer
a micromechanical solidification heat transfer in one dimensional Al–Al_2O_3 composite and its consequence on microstructure evolution, 193
Hydrogen
cracking characteristics of A516 steel weldment in H_2S containing environments, 219
effects of hydrogen on thermally activated dislocation motion in iron, 43

Infiltration
effect of reinforcement architecture on mechanical properties of a short fibre/magnesium RZ5 MMC manufactured by preform infiltration, 153
Interfaces
limits of conventional micromechanical analysis of interface properties in glass–epoxy model composites, 159
Intermetallics
a new model of the pest-like disintegration of intermetallics due to intergranular oxidation, 241
Inverse segregation
a re-evaluation of inverse segregation in the Al(rich)–Cu system, 211

Ion beams
surface modification and coating of powders by ion beam techniques, 335
Iron
effects of hydrogen on thermally activated dislocation motion in iron, 43
investigation of the austenite–bainite transformation in gray iron using real time neutron transmission, 301

Lasers
crack-free hard surface produced by laser nitriding of commercial purity titanium, 229

Magnesium
effect of reinforcement architecture on mechanical properties of a short fibre/magnesium RZ5 MMC manufactured by preform infiltration, 153
Manganese
microstructure of zirconia–(MnZn ferrite) composites, 327
Mechanical test
solid state extrusion as a mechanical test method, 81
Mesoscopic scales
triple junctions at the mesoscopic, microscopic and nanoscopic scales, 113
Metals
macroscopic and microscopic phenomena of nickel/titanium "shape memory" bimetallic strips fabricated by explosive cladding and rolling, 267
Microscopic scales
triple junctions at the mesoscopic, microscopic and nanoscopic scales, 113

Nanoscopic scales
triple junctions at the mesoscopic, microscopic and nanoscopic scales, 113
Nickel
crack-free hard surface produced by laser nitriding of commercial purity titanium, 229
explosive welding of a near-equiatomic nickel–titanium alloy to low-carbon steel, 251
macroscopic and microscopic phenomena of nickel/titanium "shape memory" bimetallic strips fabricated by explosive cladding and rolling, 267
microstructure of a nickel-base superalloy after creep in [011] orientation at 1173 K, 147
phase transformations and recrystallization in Ni–33at.%Cr alloy, 185
shape memory TiNi synthesis form elemental powders, 291
transmission electron microscopy analysis of the early stages of damage in a γ/γ' nickel-based alloy under low cycle fatigue, 133
Nitrogen
combustion-synthesized β'-SiAlON reinforced with SiC monofilaments, 341
thermodynamic calculation of chemical driving force for complex carbonitrides in multicomponent microalloyed steels, 247

Oxidation
a new model of the pest-like disintegration of intermetallics due to intergranular oxidation, 241
Oxygen
a micromechanical solidification heat transfer in one dimensional Al–Al_2O_3 composite and its consequence on microstructure evolution, 193
combustion-synthesized β'-SiAlON reinforced with SiC monofilaments, 341
fabrication of Al_2O_3 fiber preform with γ-Al_2O_3 powder binder for 6061 alloy matrix composites, 353
the effects of electrodischarge machining on fracture strength and surface microstructure of Al_2O_3–Cr_3C_2 composite, 91

Phase transformation
phase transformations and recrystallization in Ni–33at.%Cr alloy, 185
Plasticity
a comparative study of superplasticity and cavitation in mechanically-alloyed IN9021 and a SiC_p/IN9021 composite, 167
the effect of impurities on ductility and cavitation in the superplastic Zn–22%Al alloy, 59
Powders
fabrication of Al_2O_3 fiber preform with γ-Al_2O_3 powder binder for 6061 alloy matrix composites, 353
shape memory TiNi synthesis from elemental powders, 291
surface modification and coating of powders by ion beam techniques, 335
Precipitation
kinetics of tensile deformation in a precipitation-hardened aluminium alloy, 97
Preforms
fabrication of Al_2O_3 fiber preform with γ-Al_2O_3 powder binder for 6061 alloy matrix composites, 353

Reinforcement
effect of reinforcement architecture on mechanical properties of a short fibre/magnesium RZ5 MMC manufactured by preform infiltration, 153
Rivets
residual stress in and around rivets in clad aluminum alloy plates, 51
Rolling
macroscopic and microscopic phenomena of nickel/titanium "shape memory" bimetallic strips fabricated by explosive cladding and rolling, 267

Shape memory alloys
macroscopic and microscopic phenomena of nickel/titanium "shape memory" bimetallic strips fabricated by explosive cladding and rolling, 267
shape memory TiNi synthesis from elemental powders, 291
Shearing
delamination of beams under transverse shear and bending, 103
Short fibres
effect of reinforcement architecture on mechanical properties of a short fibre/magnesium RZ5 MMC manufactured by preform infiltration, 153
Silicon
a comparative study of superplasticity and cavitation in mechanically-alloyed IN9021 and a SiC_p/IN9021 composite, 167
combustion-synthesized β'-SiAlON reinforced with SiC monofilaments, 341
properties of SiC-fibre reinforced titanium alloys processed by fibre coating and hot isostatic pressing, 201
Solidification
a micromechanical solidification heat transfer in one dimensional Al–Al_2O_3 composite and its consequence on microstructure evolution, 193

Steel
cracking characteristics of A516 steel weldment in H_2S containing environments, 219
explosive welding of a near-equiatomic nickel–titanium alloy to low-carbon steel, 251
thermodynamic calculation of chemical driving force for complex carbonitrides in multicomponent microalloyed steels, 247
Stress
on newtonian viscoplastic dislocation creep and the effect of the Peierls stress, 175
residual stress in and around rivets in clad aluminum alloy plates, 51
Sulphur
cracking characteristics of A516 steel weldment in H_2S containing environments, 219
Surface modification
surface modification and coating of powders by ion beam techniques, 335

Thermal loading
elastic constant degradation from microcracking in ceramic–ceramic composites cycled by slow thermal loading, 317
Titanium
brazing of titanium-based alloys with amorphous 25wt.%Ti–25wt.%Zr–50wt.%Cu filler metal, 305
crack-free hard surface produced by laser nitriding of commercial purity titanium, 229
explosive welding of a near-equiatomic nickel–titanium alloy to low-carbon steel, 251
macroscopic and microscopic phenomena of nickel/titanium "shape memory" bimetallic strips fabricated by explosive cladding and rolling, 267
observations on the microstructure and performance of an Al–Ti–C grain-refining master alloy, 283
orientation dependence of cyclic deformation in high purity titanium single crystals, 23
properties of SiC-fibre reinforced titanium alloys processed by fibre coating and hot isostatic pressing, 201
shape memory TiNi synthesis from elemental powders, 291
Transmission electron microscopy
transmission electron microscopy analysis of the early stages of damage in a γ/γ' nickel-based alloy under low cycle fatigue, 133
Triple junctions
triple junctions at the mesoscopic, microscopic and nanoscopic scales, 113

Wall structures
a theory of dipolar dislocation wall structures, 69
Welding
explosive welding of a near-equiatomic nickel–titanium alloy to low-carbon steel, 251

Zinc
microstructure of zirconia–(MnZn ferrite) composites, 327
the effect of impurities on ductility and cavitation in the superplastic Zn–22%Al alloy, 59
Zirconium
brazing of titanium-based alloys with amorphous 25wt.%Ti–25wt.%Zr–50wt.%Cu filler metal, 305
microstructure of zirconia–(MnZn ferrite) composites, 327
recrystallization mechanisms in a Cu–Cr–Zr alloy with a bimodal distribution of particles, 255